

SEQUENCE LISTING

<110> Yan et al.

<120> SUBSTRATES AND ASSAYS FOR BETA-SECRETASE ACTIVITY

<130> 29915/00281F

<140> To be assigned

<141> 2004-03-16

<150> 09/908,943

<151> 2001-07-19

<150> 60/219,795

<151> 2000-07-19

<160> 197

<170> PatentIn Ver. 2.0

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<212> DNA

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Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
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Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
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Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
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<210> 40
<211> 5
<212> PRT
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<400> 40
Val Gly Ser Gly Val
1 5

<210> 41
<211> 12
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<213> Artificial Sequence

<220>
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peptide sequence

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<223> Xaa= cysteic acid

<400> 41
Lys Val Glu Ala Leu Tyr Leu Val Xaa Gly Glu Arg
1 5 10

<210> 42
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
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peptide sequence

<400> 42
Trp Arg Arg Val Glu Ala Leu Tyr Leu Val Glu Gly Glu Arg Lys
1 5 10 15

<210> 43
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
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peptide sequence

<400> 43
Lys Val Glu Ala Asn Tyr Leu Val Glu Gly Glu Arg Lys Lys
1 5 10

<210> 44
<211> 4
<212> PRT
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<220>
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peptide sequence

<400> 44
Met Leu Leu Leu
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<210> 45
<211> 6
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<220>
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<400> 45
Asp Ala Ala His Pro Gly
1 5

<210> 46
<211> 14
<212> PRT
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<220>
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peptide sequence

<400> 46
Lys Val Glu Ala Asn Tyr Asp Val Glu Gly Glu Arg Lys Lys
1 5 10

<210> 47
<211> 14
<212> PRT
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<220>
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<400> 47
Lys Val Glu Ala Asn Leu Ala Val Glu Gly Glu Arg Lys Lys
1 5 10

<210> 48
<211> 14

<212> PRT
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<220>

<223> Description of Artificial Sequence: synthetic
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<400> 48

Lys Val Glu Ala Leu Tyr Ala Val Glu Gly Glu Arg Lys Lys
1 5 10

<210> 49

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

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peptide sequence

<220>

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<223> Xaa = E, G, I, D, T, cysteic acid or S

<400> 49

Xaa Ala Asn Tyr Glu Val Glu Phe
1 5

<210> 50

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>

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<222> (2)

<223> Xaa= A, V, I, S, H, Y, T or F

<400> 50

Glu Xaa Asn Tyr Glu Val Glu Phe
1 5

<210> 51

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>

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<223> Xaa= N, L, K, S, G, T, D, A, Q, or E

<400> 51
Glu Ala Xaa Tyr Glu Val Glu Phe
1 5

<210> 52
<211> 8
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<220>
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peptide sequence

<220>
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<223> Xaa= Y, L, M, Nle, F or H

<400> 52
Glu Ala Asn Xaa Glu Val Glu Phe
1 5

<210> 53
<211> 8
<212> PRT
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<220>
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<223> Xaa= E, A, D, M, Q, S or G

<400> 53
Glu Ala Asn Tyr Xaa Val Glu Phe
1 5

<210> 54
<211> 8
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<223> Xaa= V, A, N, T, L, F or S

<400> 54
Glu Ala Asn Tyr Glu Xaa Glu Phe
1 5

<210> 55

<211> 8
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<400> 55
Glu Ala Asn Tyr Glu Val Xaa Phe
1 5

<210> 56
<211> 8
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<223> Xaa= F, W, G, A, H, P, G, N, S or E

<400> 56
Glu Ala Asn Tyr Glu Val Glu Xaa
1 5

<210> 57
<211> 8
<212> PRT
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<223> Xaa= E, G, I, D, T, cyeteic acid or S

<400> 57
Xaa Val Leu Leu Ala Ala Gly Trp
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<210> 58
<211> 8
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<220>
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peptide sequence

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<223> Xaa= A, V, I, S, H, Y, T or F

<400> 58
Gly Xaa Leu Leu Ala Ala Gly Trp
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<210> 59
<211> 8
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<400> 59
Gly Val Xaa Leu Ala Ala Gly Trp
1 5

<210> 60
<211> 8
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<223> Xaa= Y, L, M, Nle, F or H

<400> 60
Gly Val Leu Xaa Ala Ala Gly Trp
1 5

<210> 61
<211> 8
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peptide sequence

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<223> Xaa= E, A, D, M, Q, S or G

<400> 61
Gly Val Leu Leu Xaa Ala Gly Trp
1 5

<210> 62
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<220>
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<222> (6)
<223> Xaa= V, A, N, T, L, F or S

<400> 62
Gly Val Leu Leu Ala Xaa Gly Trp
1 5

<210> 63
<211> 8
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<213> Artificial Sequence

<220>
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peptide sequence

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<400> 63
Gly Val Leu Leu Ala Ala Xaa Trp
1 5

<210> 64
<211> 8
<212> PRT
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<220>
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peptide sequence

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<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 64
Gly Val Leu Leu Ala Ala Gly Xaa
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<210> 65

<211> 8
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<400> 65
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<210> 66
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<220>
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peptide sequence

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<223> Xaa= A, V, I, S, H, Y, T or F

<400> 66
Ile Xaa Lys Met Asp Asn Phe Gly
1 5

<210> 67
<211> 8
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<400> 67
Ile Ile Xaa Met Asp Asn Phe Gly
1 5

<210> 68
<211> 8
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peptide sequence

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<223> Xaa= Y, L, M, Nle, F or H

<400> 68
Ile Ile Lys Xaa Asp Asn Phe Gly
1 5

<210> 69
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<400> 69
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<210> 70
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<400> 70
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<210> 71
<211> 8
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<223> Xaa= E, G, F, H, cysteic acid or S

<400> 71

Ile Ile Lys Met Asp Asn Xaa Gly
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<210> 72

<211> 8

<212> PRT

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<222> (8)

<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 72

Ile Ile Lys Met Asp Asn Phe Xaa
1 5

<210> 73

<211> 10

<212> PRT

<213> Artificial Sequence

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peptide sequence

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<223> Xaa= E, G, I, D, T, cysteic acid or S

<400> 73

Xaa Ser Ser Asn Leu Glu Met Thr His Ala
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<210> 74

<211> 10

<212> PRT

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peptide sequence

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<223> Xaa= A, V, I, S, H, Y, T or F

<400> 74

Asp Xaa Ser Asn Leu Glu Met Thr His Ala
1 5 10

<210> 75
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<400> 75
Asp Ser Xaa Asn Leu Glu Met Thr His Ala
1 5 10

<210> 76
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<400> 76
Asp Ser Ser Xaa Met Thr His Ala
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<210> 77
<211> 10
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<400> 77
Asp Ser Ser Asn Leu Glu Xaa Thr His Ala
1 5 10

<210> 78
<211> 10
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<222> (8)

<223> Xaa= V, A, N, T, L, F or S

<400> 78

Asp Ser Ser Asn Leu Glu Met Xaa His Ala
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<210> 79

<211> 9

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Asp Ser Asn Leu Glu Met Thr Xaa Ala
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<210> 80

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Asp Ser Asn Leu Glu Met Thr His Xaa
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<210> 81

<211> 8

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<400> 81

Xaa His Gly Phe Gln Leu Xaa His

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5

<210> 82

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<222> (2)

<223> Xaa= A, V, I, S, H, Y, T or F

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<223> Xaa= cysteic acid

<400> 82

Thr Xaa Gly Phe Gln Leu Xaa His

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<210> 83

<211> 8

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Thr His Xaa Phe Gln Leu Xaa His

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<210> 84

<211> 8

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<222> (7)

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Thr His Gly Xaa Gln Leu Xaa His
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<210> 85

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Thr His Gly Phe Xaa Leu Xaa His
1 5

<210> 86

<211> 8

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1 5

<210> 87
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1 5

<210> 88
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<400> 88
Thr His Gly Phe Gln Leu Xaa Xaa
1 5

<210> 89
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<400> 89

Xaa Tyr Thr His Ser Phe Ser Pro
1 5

<210> 90
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<400> 90
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1 5

<210> 91
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peptide sequence

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<400> 91
Xaa Tyr Xaa His Ser Phe Ser Pro
1 5

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Xaa Tyr Thr Xaa Ser Phe Ser Pro
1 5

<210> 93
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Xaa Tyr Thr His Xaa Phe Ser Pro
1 5

<210> 94
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Xaa Tyr Thr His Ser Xaa Ser Pro
1 5

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Xaa Tyr Thr His Ser Phe Xaa Pro
1 5

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peptide sequence

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<400> 96
Xaa Tyr Thr His Ser Phe Ser Xaa
1 5

<210> 97
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Xaa Thr Asp Xaa Gly Ser Xaa Gly
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peptide sequence

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Ser Xaa Asp Xaa Gly Ser Xaa Gly
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<210> 99

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peptide sequence

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<222> (4)

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Ser Thr Xaa Xaa Gly Ser Xaa Gly
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peptide sequence

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Ser Thr Asp Xaa Gly Ser Xaa Gly
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<222> (5)

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Ser Thr Asp Xaa Xaa Ser Xaa Gly
1 5

<210> 102

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<222> (6)

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1 5

<210> 103

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<222> (7)

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<210> 104

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1 5

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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (2)
<223> Xaa= A, V, I, S, H, Y, T or F

<220>
<221> SITE
<222> (4)..(7)
<223> Xaa= any amino acid

<400> 106
Xaa Xaa Ala Xaa Xaa Xaa Xaa Asn
1 5

<210> 107
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (3)
<223> Xaa= N, L, K, S, G, T, D, A, Q or E

<220>
<221> SITE
<222> (4)..(7)
<223> Xaa= any amino acid

<400> 107
Xaa Phe Xaa Xaa Xaa Xaa Xaa Asn
1 5

<210> 108
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (4)
<223> Xaa= Y, L, M, Nle, F or H

<220>
<221> SITE
<222> (5)..(7)
<223> Xaa= any amino acid

<400> 108
Xaa Phe Ala Xaa Xaa Xaa Xaa Asn
1 5

<210> 109
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (4)
<223> Xaa = any amino acid

<220>
<221> SITE
<222> (5)
<223> Xaa= E, A, D, M, Q, S or G

<220>
<221> SITE
<222> (6)..(7)
<223> Xaa= any amino acid

<400> 109
Xaa Phe Ala Xaa Xaa Xaa Xaa Asn
1 5

<210> 110
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (4)..(5)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (6)
<223> Xaa= V, A, N, T, L, F or S

<220>
<221> SITE
<222> (7)
<223> Xaa= any amino acid

<400> 110
Xaa Phe Ala Xaa Xaa Xaa Xaa Asn
1 5

<210> 111
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (4)..(6)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (7)
<223> Xaa= E, G, F, H, cysteic acid or S

<400> 111
Xaa Phe Ala Xaa Xaa Xaa Xaa Asn
1 5

<210> 112
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (1)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (4)..(7)
<223> Xaa= any amino acid

<220>
<221> SITE
<222> (8)
<223> Xaa= F, W, G, A, H, P, G, N or S

<400> 112
Xaa Phe Ala Xaa Xaa Xaa Xaa Xaa
1 5

<210> 113
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 113
Glu Val Asn Leu Asp Ala Glu Phe Arg
1 5

<210> 114
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 114
Asp Tyr Lys Asp Asp Asp Lys
1 5

<210> 115
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 115
Ala Cys Gly Ser Glu Ser Met Asp Ser Gly Ile Ser Leu Asp Asn Lys
1 5 10 15

Trp

<210> 116
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 116
Trp Lys Lys Gly Ala Ile Ile Gly Leu Met Val Gly Gly Val Val Lys
1 5 10 15

Lys

<210> 117

<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 117
Ala Asn Leu Ser Thr Phe Ala Gln Pro Arg Arg
1 5 10

<210> 118
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 118
Tyr Arg Tyr Gln Ser His Asp Tyr Ala Phe Ser Ser Val Glu Lys Leu
1 5 10 15
Leu His Leu Gly Gly Cys
20

<210> 119
<211> 22
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 119
Tyr Arg Tyr Gln Ser His Asp Tyr Ala Phe Ser Ser Val Glu Lys Leu
1 5 10 15
Leu His Leu Gly Gly Cys
20

<210> 120
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 120
Lys Thr Ile Thr Leu Glu Val Glu Pro Ser
1 5 10

<210> 121
<211> 12

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>
<221> SITE
<222> (9)
<223> Xaa= cysteic acid

<400> 121
Val Glu Ala Leu Tyr Leu Val Cys Xaa Gly Glu Arg
1 5 10

<210> 122
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 122
Val Glu Ala Leu Tyr Leu Val Glu Gly Glu Arg
1 5 10

<210> 123
<211> 363
<212> PRT
<213> Homo sapiens

<220>
<223> galactosyltransferase

<400> 123
Met Ala Ser Lys Ser Trp Leu Asn Phe Leu Thr Phe Leu Cys Gly Ser
1 5 10 15
Ala Ile Gly Phe Leu Leu Cys Ser Gln Leu Phe Ser Ile Leu Leu Gly
20 25 30
Glu Lys Val Asp Thr Gln Pro Asn Val Leu His Asn Asp Pro His Ala
35 40 45
Arg His Ser Asp Asp Asn Gly Gln Asn His Leu Glu Gly Gln Met Asn
50 55 60
Phe Asn Ala Asp Ser Ser Gln His Lys Asp Glu Asn Thr Asp Ile Ala
65 70 75 80
Glu Asn Leu Tyr Gln Lys Val Arg Ile Leu Cys Trp Val Met Thr Gly
85 90 95
Pro Gln Asn Leu Glu Lys Lys Ala Lys His Val Lys Ala Thr Trp Ala
100 105 110
Gln Arg Cys Asn Lys Val Leu Phe Met Ser Ser Glu Glu Asn Lys Asp
115 120 125

Phe Pro Ala Val Gly Leu Lys Thr Lys Glu Gly Arg Asp Gln Leu Tyr
 130 135 140
 Trp Lys Thr Ile Lys Ala Phe Gln Tyr Val His Glu His Tyr Leu Glu
 145 150 155 160
 Asp Ala Asp Trp Phe Leu Lys Ala Asp Asp Thr Tyr Val Ile Leu
 165 170 175
 Asp Asn Leu Arg Trp Leu Leu Ser Lys Tyr Asp Pro Glu Glu Pro Ile
 180 185 190
 Tyr Phe Gly Arg Arg Phe Lys Pro Tyr Val Lys Gln Gly Tyr Met Ser
 195 200 205
 Gly Gly Ala Gly Tyr Val Leu Ser Lys Glu Ala Leu Lys Arg Phe Val
 210 215 220
 Asp Ala Phe Lys Thr Asp Lys Cys Thr His Ser Ser Ser Ile Glu Asp
 225 230 235 240
 Leu Ala Leu Gly Arg Cys Met Glu Ile Met Asn Val Glu Ala Gly Asp
 245 250 255
 Ser Arg Asp Thr Ile Gly Lys Glu Thr Phe His Pro Phe Val Pro Glu
 260 265 270
 His His Leu Ile Lys Gly Tyr Leu Pro Arg Thr Phe Trp Tyr Trp Asn
 275 280 285
 Tyr Asn Tyr Tyr Pro Pro Val Glu Gly Pro Gly Cys Cys Ser Asp Leu
 290 295 300
 Ala Val Ser Phe His Tyr Val Asp Ser Thr Thr Met Tyr Glu Leu Glu
 305 310 315 320
 Tyr Leu Val Tyr His Leu Arg Pro Tyr Gly Tyr Leu Tyr Arg Tyr Gln
 325 330 335
 Pro Thr Leu Pro Glu Arg Ile Leu Lys Glu Ile Ser Gln Ala Asn Lys
 340 345 350
 Asn Glu Asp Thr Lys Val Lys Leu Gly Asn Pro
 355 360

<210> 124

<211> 405

<212> PRT

<213> Homo sapiens

<220>

<223> Homo sapiens sialyltransferase 1

<400> 124

Ile His Thr Asn Leu Lys Lys Lys Phe Ser Cys Cys Val Leu Val Phe
 1 5 10 15

Leu Leu Phe Ala Val Ile Cys Val Trp Lys Glu Lys Lys Lys Gly Ser
 20 25 30

Tyr Tyr Asp Ser Phe Lys Leu Gln Thr Lys Glu Phe Gln Val Leu Lys

35					40					45					
Ser	Leu	Gly	Lys	Leu	Ala	Met	Gly	Ser	Asp	Ser	Gln	Ser	Val	Ser	Ser
	50					55					60				
Ser	Ser	Thr	Gln	Asp	Pro	His	Arg	Gly	Arg	Gln	Thr	Leu	Gly	Ser	Leu
	65					70					75				80
Arg	Gly	Leu	Ala	Lys	Ala	Lys	Pro	Glu	Ala	Ser	Phe	Gln	Val	Trp	Asn
				85					90					95	
Lys	Asp	Ser	Ser	Ser	Lys	Asn	Leu	Ile	Pro	Arg	Leu	Gln	Lys	Ile	Trp
			100					105					110		
Lys	Asn	Tyr	Leu	Ser	Met	Asn	Lys	Tyr	Lys	Val	Ser	Tyr	Lys	Gly	Pro
		115					120					125			
Gly	Pro	Gly	Ile	Lys	Phe	Ser	Ala	Glu	Ala	Leu	Arg	Cys	His	Leu	Arg
	130					135					140				
Asp	His	Val	Asn	Val	Ser	Met	Val	Glu	Val	Thr	Asp	Phe	Pro	Phe	Asn
	145					150					155				160
Thr	Ser	Glu	Trp	Glu	Gly	Tyr	Leu	Pro	Lys	Glu	Ser	Ile	Arg	Thr	Lys
				165					170					175	
Ala	Gly	Pro	Trp	Gly	Arg	Cys	Ala	Val	Val	Ser	Ser	Ala	Gly	Ser	Leu
			180					185					190		
Lys	Ser	Ser	Gln	Leu	Gly	Arg	Glu	Ile	Asp	Asp	His	Asp	Ala	Val	Leu
		195					200					205			
Arg	Phe	Asn	Gly	Ala	Pro	Thr	Ala	Asn	Phe	Gln	Gln	Asp	Val	Gly	Thr
	210					215						220			
Lys	Thr	Thr	Ile	Arg	Leu	Met	Asn	Ser	Gln	Leu	Val	Thr	Thr	Glu	Lys
	225					230					235				240
Arg	Phe	Leu	Lys	Asp	Ser	Leu	Tyr	Asn	Glu	Gly	Ile	Leu	Ile	Val	Trp
			245						250					255	
Asp	Pro	Ser	Val	Tyr	His	Ser	Asp	Ile	Pro	Lys	Trp	Tyr	Gln	Asn	Pro
			260					265					270		
Asp	Tyr	Asn	Phe	Phe	Asn	Asn	Tyr	Lys	Thr	Tyr	Arg	Lys	Leu	His	Pro
		275					280					285			
Asn	Gln	Pro	Phe	Tyr	Ile	Leu	Lys	Pro	Gln	Met	Pro	Trp	Glu	Leu	Trp
	290					295					300				
Asp	Ile	Leu	Gln	Glu	Ile	Ser	Pro	Glu	Glu	Ile	Gln	Pro	Asn	Pro	Pro
	305					310					315				320
Ser	Ser	Gly	Met	Leu	Gly	Ile	Ile	Ile	Met	Met	Thr	Leu	Cys	Asp	Gln
			325						330					335	
Val	Asp	Ile	Tyr	Glu	Phe	Leu	Pro	Ser	Lys	Arg	Lys	Thr	Asp	Val	Cys
			340					345					350		
Tyr	Tyr	Tyr	Gln	Lys	Phe	Phe	Asp	Ser	Ala	Cys	Thr	Met	Gly	Ala	Tyr
		355					360					365			
His	Pro	Leu	Leu	Tyr	Glu	Lys	Asn	Leu	Val	Lys	His	Leu	Asn	Gln	Gly

370 375 380
Thr Asp Glu Asp Ile Tyr Leu Leu Gly Lys Ala Thr Leu Pro Gly Phe
385 390 395 400
Arg Thr Ile His Cys
405

<210> 125
<211> 518
<212> PRT
<213> Homo sapiens

<220>
<223> Homo sapiens aspartyl protease 1

<400> 125
Met Gly Ala Leu Ala Arg Ala Leu Leu Leu Pro Leu Leu Ala Gln Trp
1 5 10 15
Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr Leu Pro
20 25 30
Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro Thr Pro Gly
35 40 45
Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu Ala Leu Ala Leu
50 55 60
Glu Pro Ala Leu Ala Ser Pro Ala Gly Ala Ala Asn Phe Leu Ala Met
65 70 75 80
Val Asp Asn Leu Gln Gly Asp Ser Gly Arg Gly Tyr Tyr Leu Glu Met
85 90 95
Leu Ile Gly Thr Pro Pro Gln Lys Leu Gln Ile Leu Val Asp Thr Gly
100 105 110
Ser Ser Asn Phe Ala Val Ala Gly Thr Pro His Ser Tyr Ile Asp Thr
115 120 125
Tyr Phe Asp Thr Glu Arg Ser Ser Thr Tyr Arg Ser Lys Gly Phe Asp
130 135 140
Val Thr Val Lys Tyr Thr Gln Gly Ser Trp Thr Gly Phe Val Gly Glu
145 150 155 160
Asp Leu Val Thr Ile Pro Lys Gly Phe Asn Thr Ser Phe Leu Val Asn
165 170 175
Ile Ala Thr Ile Phe Glu Ser Glu Asn Phe Phe Leu Pro Gly Ile Lys
180 185 190
Trp Asn Gly Ile Leu Gly Leu Ala Tyr Ala Thr Leu Ala Lys Pro Ser
195 200 205
Ser Ser Leu Glu Thr Phe Phe Asp Ser Leu Val Thr Gln Ala Asn Ile
210 215 220
Pro Asn Val Phe Ser Met Gln Met Cys Gly Ala Gly Leu Pro Val Ala
225 230 235 240

[illegible]

<210> 126

<211> 255

<212> PRT

<213> Homo sapiens

 $\langle 220 \rangle$

<223> Homo sapiens syntaxin 6

<400> 126

Met Ser Met Glu Asp Pro Phe Phe Val Val Lys Gly Glu Val Gln Lys
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20 25 30
Gln Asp Pro Ser Thr Ala Thr Arg Glu Glu Ile Asp Trp Thr Thr Asn
35 40 45
Glu Leu Arg Asn Asn Leu Arg Ser Ile Glu Trp Asp Leu Glu Asp Leu
50 55 60
Asp Glu Thr Ile Ser Ile Val Glu Ala Asn Pro Arg Lys Phe Asn Leu
65 70 75 80
Asp Ala Thr Glu Leu Ser Ile Arg Lys Ala Phe Ile Thr Ser Thr Arg
85 90 95
Gln Val Val Arg Asp Met Lys Asp Gln Met Ser Thr Ser Ser Val Gln
100 105 110
Ala Leu Ala Glu Arg Lys Asn Arg Gln Ala Leu Leu Gly Asp Ser Gly
115 120 125
Ser Gln Asn Trp Ser Thr Gly Thr Thr Asp Lys Tyr Gly Arg Leu Asp
130 135 140
Arg Glu Leu Gln Arg Ala Asn Ser His Phe Ile Glu Glu Gln Gln Ala
145 150 155 160
Gln Gln Gln Leu Ile Val Glu Gln Gln Asp Glu Gln Leu Glu Leu Val
165 170 175
Ser Gly Ser Ile Gly Val Leu Lys Asn Met Ser Gln Arg Ile Gly Gly
180 185 190
Glu Leu Glu Glu Gln Ala Val Met Leu Glu Asp Phe Ser His Glu Leu
195 200 205
Glu Ser Thr Gln Ser Arg Leu Asp Asn Val Met Lys Lys Leu Ala Lys
210 215 220
Val Ser His Met Thr Ser Asp Arg Arg Gln Trp Cys Ala Ile Ala Ile
225 230 235 240
Leu Phe Ala Val Leu Leu Val Val Leu Ile Leu Phe Leu Val Leu
245 250 255

<210> 127

<211> 1728

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding recombinant fusion protein

<400> 127

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gttgaggagg agaaccgga cttctggaac cgcgaggcag ccgaggccct gggtgccgcc 120
aagaagctgc agcctgcaca gacagccgcc aagaacctca tcattctcct gggcgatggg 180

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atgggggtgt ctacggtgac agctgccagg atcctaaaag ggcagaagaa ggacaaactg 240
gggcctgaga taccctggc catggaccgc ttcccatatg tggctctgtc caagacatac 300
aatgtagaca aacatgtgcc agacagtggg gccacagcca cggcctacct gtgcgggggtc 360
aagggaact tccagaccat tggcttgagt gcagccgccc gctttaacca gtgcaacacg 420
acacgcggca acgaggtcat ctccgtgatg aatcgggcca agaaagcagg gaagtcagtg 480
ggagtggtaa ccaccacacg agtgcagcac gcctcgccag ccggcaccta cgcccacacg 540
gtgaaccgca actggtactc ggacgccgac gtgcctgcct cggcccgcga ggaggggtgc 600
caggacatcg ctacgcagct catctccaac atggacattg acgtgatcct aggtggaggc 660
cgaaagtaca tgtttcccat gggaacccca gacctgagt acccagatga ctacagccaa 720
ggtgggacca ggctggacgg gaagaatctg gtgcaggaat ggctggcgaa gcgccagggt 780
gcccggtatg tgtggaaccg cactgagctc atgcaggctt ccctggaccc gtctgtgacc 840
catctcatgg gtctctttga gcctggagac atgaaatacg agatccaccg agactccaca 900
ctggaccctt ccctgatgga gatgacagag gctgcctgcg gcctgctgag caggaacccc 960
cgcggttctt tcctcttcgt ggaggggtgg cgcatcgacc atggatcatca tgaagcagg 1020
gcttaccggg cactgactga gacgatcatg ttcgacgacg ccattgagag ggcggggccag 1080
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gacaggaagg cctacacggg cctcctatac ggaaacggtc caggctatgt gctcaaggac 1260
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gcagtgcgcc tggacgaaga gaccacgca ggcgaggacg tggcggtgtt cgcgcgcgcg 1380
ccgcaggcgc acctggttca cggcgtgcag gaggagacct tcatagcgca cgtcatggcc 1440
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gacgccgcgc acccaggtaa ctatgaagtt gaattccgaa gagcactcta cgtagagggt 1560
gaaagaggat tcttctacac tccaaaggca ctctacctcg tagagggtga aagaggattc 1620
ttctacacta gtctcatgac catagcctat gtcattggctg ccattcgcgc cctcttcatg 1680
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<210> 128

<211> 575

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: recombinant fusion protein sequence

<400> 128

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Gly Ile Ile Pro Val Glu Glu Glu Asn Pro Asp Phe Trp Asn Arg Glu
                20                      25                     30

Ala Ala Glu Ala Leu Gly Ala Ala Lys Lys Leu Gln Pro Ala Gln Thr
                35                      40                     45

Ala Ala Lys Asn Leu Ile Ile Phe Leu Gly Asp Gly Met Gly Val Ser
                50                      55                     60

Thr Val Thr Ala Ala Arg Ile Leu Lys Gly Gln Lys Lys Asp Lys Leu
                65                      70                     75                     80

Gly Pro Glu Ile Pro Leu Ala Met Asp Arg Phe Pro Tyr Val Ala Leu
                85                      90                     95

Ser Lys Thr Tyr Asn Val Asp Lys His Val Pro Asp Ser Gly Ala Thr
                100                     105                    110

Ala Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Phe Gln Thr Ile Gly
                115                     120                    125

Leu Ser Ala Ala Ala Arg Phe Asn Gln Cys Asn Thr Thr Arg Gly Asn
                130                     135                    140

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Glu	Val	Ile	Ser	Val	Met	Asn	Arg	Ala	Lys	Lys	Ala	Gly	Lys	Ser	Val	145	150	155	160
Gly	Val	Val	Thr	Thr	Thr	Arg	Val	Gln	His	Ala	Ser	Pro	Ala	Gly	Thr	165	170		175
Tyr	Ala	His	Thr	Val	Asn	Arg	Asn	Trp	Tyr	Ser	Asp	Ala	Asp	Val	Pro	180	185		190
Ala	Ser	Ala	Arg	Gln	Glu	Gly	Cys	Gln	Asp	Ile	Ala	Thr	Gln	Leu	Ile	195	200		205
Ser	Asn	Met	Asp	Ile	Asp	Val	Ile	Leu	Gly	Gly	Gly	Arg	Lys	Tyr	Met	210	215		220
Phe	Pro	Met	Gly	Thr	Pro	Asp	Pro	Glu	Tyr	Pro	Asp	Asp	Tyr	Ser	Gln	225	230		235
Gly	Gly	Thr	Arg	Leu	Asp	Gly	Lys	Asn	Leu	Val	Gln	Glu	Trp	Leu	Ala	245	250		255
Lys	Arg	Gln	Gly	Ala	Arg	Tyr	Val	Trp	Asn	Arg	Thr	Glu	Leu	Met	Gln	260	265		270
Ala	Ser	Leu	Asp	Pro	Ser	Val	Thr	His	Leu	Met	Gly	Leu	Phe	Glu	Pro	275	280		285
Gly	Asp	Met	Lys	Tyr	Glu	Ile	His	Arg	Asp	Ser	Thr	Leu	Asp	Pro	Ser	290	295		300
Leu	Met	Glu	Met	Thr	Glu	Ala	Ala	Leu	Arg	Leu	Leu	Ser	Arg	Asn	Pro	305	310		315
Arg	Gly	Phe	Phe	Leu	Phe	Val	Glu	Gly	Gly	Arg	Ile	Asp	His	Gly	His	325	330		335
His	Glu	Ser	Arg	Ala	Tyr	Arg	Ala	Leu	Thr	Glu	Thr	Ile	Met	Phe	Asp	340	345		350
Asp	Ala	Ile	Glu	Arg	Ala	Gly	Gln	Leu	Thr	Ser	Glu	Glu	Asp	Thr	Leu	355	360		365
Ser	Leu	Val	Thr	Ala	Asp	His	Ser	His	Val	Phe	Ser	Phe	Gly	Gly	Tyr	370	375		380
Pro	Leu	Arg	Gly	Ser	Ser	Ile	Phe	Gly	Leu	Ala	Pro	Gly	Lys	Ala	Arg	385	390		395
Asp	Arg	Lys	Ala	Tyr	Thr	Val	Leu	Leu	Tyr	Gly	Asn	Gly	Pro	Gly	Tyr	405	410		415
Val	Leu	Lys	Asp	Gly	Ala	Arg	Pro	Asp	Val	Thr	Glu	Ser	Glu	Ser	Gly	420	425		430
Ser	Pro	Glu	Tyr	Arg	Gln	Gln	Ser	Ala	Val	Pro	Leu	Asp	Glu	Glu	Thr	435	440		445
His	Ala	Gly	Glu	Asp	Val	Ala	Val	Phe	Ala	Arg	Gly	Pro	Gln	Ala	His	450	455		460
Leu	Val	His	Gly	Val	Gln	Glu	Gln	Thr	Phe	Ile	Ala	His	Val	Met	Ala	465	470		475
																			480

Phe	Ala	Ala	Cys	Leu	Glu	Pro	Tyr	Thr	Ala	Cys	Asp	Leu	Ala	Pro	Pro
				485					490					495	
Ala	Gly	Thr	Thr	Asp	Ala	Ala	His	Pro	Gly	Asn	Tyr	Glu	Val	Glu	Pro
			500					505					510		
Arg	Arg	Ala	Leu	Tyr	Val	Glu	Gly	Glu	Arg	Gly	Phe	Phe	Tyr	Thr	Pro
		515					520					525			
Lys	Ala	Leu	Tyr	Leu	Val	Glu	Gly	Glu	Arg	Gly	Phe	Phe	Tyr	Thr	Ser
	530					535					540				
Leu	Met	Thr	Ile	Ala	Tyr	Val	Met	Ala	Ala	Ile	Cys	Ala	Leu	Phe	Met
545					550					555					560
Leu	Pro	Leu	Cys	Leu	Met	Val	Asp	Tyr	Lys	Asp	Asp	Asp	Asp	Lys	
			565						570					575	

<210> 129
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic
 peptide sequence

<400> 129
 Lys Met Asp Ala Glu
 1 5

<210> 130
 <211> 5
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic
 peptide sequence

<400> 130
 Gly Arg Arg Gly Ser
 1 5

<210> 131
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic
 peptide sequence

<400> 131
 Val Glu Ala Asn Tyr Glu Val Glu Gly Glu
 1 5 10

<210> 132
 <211> 10

<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 132

Val Glu Ala Asn Tyr Ala Val Glu Gly Glu
1 5 10

<210> 133

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 133

Lys Thr Ile Asn Leu Glu Val Glu Pro Ser
1 5 10

<210> 134

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>

<221> MOD_RES

<222> (5)

<223> Nle

<400> 134

Lys Thr Ile Asn Xaa Glu Val Glu Pro Ser
1 5 10

<210> 135

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD_RES

<222> (5)

<223> Nle

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 135

Lys Thr Ile Asn Xaa Glu Val Asp Pro Ser

1 5 10

<210> 136
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<221> MOD_RES
<222> (5)
<223> Nle

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 136
Lys Thr Ile Asn Xaa Asp Val Asp Pro Ser
1 5 10

<210> 137
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 137
Lys Thr Ile Ser Leu Asp Val Glu Pro Ser
1 5 10

<210> 138
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 138
Lys Thr Ile Ser Leu Asp Val Asp Pro Ser
1 5 10

<210> 139
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 139
Lys Met Asp Ala
1

<210> 140
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 140
Ser Tyr Glu Val
1

<210> 141
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 141
Ser Glu Val Ser Tyr Glu Val Glu Phe Arg
1 5 10

<210> 142
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 142
Asn Leu Asp Ala
1

<210> 143
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 143
Ser Glu Val Ser Tyr Asp Ala Glu Phe Arg
1 5 10

<210> 144
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic

peptide sequence

<400> 144

Ser Glu Val Ser Tyr Glu Ala Glu Phe Arg
1 5 10

<210> 145

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 145

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
1 5 10 15

Glu Val Ser Tyr Glu Val Glu Phe Arg
20 25

<210> 146

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 146

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Val Ser Tyr Glu
1 5 10 15

Val Glu Phe Arg
20

<210> 147

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 147

Lys Thr Glu Glu Ile Ser Glu Val Ser Tyr Glu Val Glu Phe Arg
1 5 10 15

<210> 148

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 148.

Thr Glu Val Ser Tyr Glu Val Glu Phe Arg
1 5 10

<210> 149

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 149

Ser Glu Val Asp Tyr Glu Val Glu Phe Arg
1 5 10

<210> 150

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 150

Thr Glu Val Asp Tyr Glu Val Glu Phe Arg
1 5 10

<210> 151

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 151

Thr Glu Ile Asp Tyr Glu Val Glu Phe Arg
1 5 10

<210> 152

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 152

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg
1 5 10

<210> 153

<211> 10

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 153
Ser Glu Ile Asp Tyr Glu Val Glu Phe Arg
1 5 10

<210> 154
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<221> SITE
<222> (11)
<223> Xaa=tryptophan

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 154
Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
1 5 10

<210> 155
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<221> SITE
<222> (16)
<223> Xaa=tryptophan

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 155
Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa
1 5 10 15

Lys Lys

<210> 156
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
<221> SITE
<222> (21)
<223> Xaa=tryptophan

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 156

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val
1 5 10 15

Glu Phe Arg Xaa Lys Lys
20

<210> 157

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>

<221> SITE

<222> (26)

<223> Xaa=tryptophan

<400> 157

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
1 5 10 15

Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
20 25

<210> 158

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (11)

<223> Xaa=tryptophan

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 158

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
1 5 10

<210> 159

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<220>

<221> SITE

<222> (16)

<223> Xaa=tryptophan

<400> 159

Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg
1 5 10 15

Xaa Lys Lys

<210> 160

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (21)

<223> Xaa=tryptophan

<220>

<223> Description of Artificial Sequence: synthetic
peptide

<400> 160

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr
1 5 10 15

Glu Val Glu Phe Arg Xaa Lys Lys
20

<210> 161

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (26)

<223> Xaa=tryptophan

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 161

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile
1 5 10 15

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
20 25

<210> 162

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (11)

<223> Xaa=oregon green

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 162

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
1 5 10

<210> 163

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (16)

<223> Xaa=oregon green

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 163

Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa
1 5 10 15

Lys Lys

<210> 164

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (21)

<223> Xaa=oregon green

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 164

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu
1 5 10 15

Val Glu Phe Arg Xaa Lys Lys
20

<210> 165

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (26)

<223> Xaa=oregon green

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 165

Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser
1 5 10 15

Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
20 25

<210> 166

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (11)

<223> Xaa=oregon green

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 166

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
1 5 10

<210> 167

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE

<222> (16)

<223> Xaa=oregon green

<220>

<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 167

Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg
1 5 10 15

Xaa Lys Lys

<210> 168

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<221> SITE
 <222> (21)
 <223> Xaa=oregon green

<220>
 <223> Description of Artificial Sequence: synthetic
 peptide sequence

<400> 168
 Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr
 1 5 10 15
 Glu Val Glu Phe Arg Xaa Lys Lys
 20

<210> 169
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <221> SITE
 <222> (26)
 <223> Xaa=oregon green

<220>
 <223> Description of Artificial Sequence: synthetic
 peptide sequence

<400> 169
 Thr Arg Pro Gly Ser Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile
 1 5 10 15
 Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Xaa Lys Lys
 20 25

<210> 170
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic
 peptide sequence

<400> 170
 Ser Glu Val Asn Tyr Glu Val Glu Phe Arg
 1 5 10

<210> 171
 <211> 47
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: synthetic
 primer for site-directed mutagenesis of APP

<400> 171
 gagatctctg aaattagtta tgaagtagaa ttccgacatg actcagg

<210> 172
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
primer for site-directed mutagenesis of APP

<400> 172
tgagtcacgt cggaattcta cttcataact aatttcagag atctcctc 48

<210> 173
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
primer for site-directed mutagenesis of APP

<400> 173
gagatctctg aaagtagtta tgaagtagaa ttccgacatg actcagg 47

<210> 174
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
primer for site-directed mutagenesis of APP

<400> 174
tgagtcacgt cggaattcta cttcataact actttcagag atctcctc 48

<210> 175
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
primer for site-directed mutagenesis of APP

<400> 175
gagatctctg aaattagtta tgaagcagaa ttccgacatg actcagg 47

<210> 176
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
primer for site-directed mutagenesis of APP

<400> 176
tgagtcacgt cggaattctg cttcataact aatttcagag atctcctc 48

<210> 177
<211> 5
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 177

Val Ser Tyr Glu Val
1 5

<210> 178

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 178

Val Ser Tyr Asp Ala
1 5

<210> 179

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 179

Ile Ser Tyr Glu Val
1 5

<210> 180

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 180

Val Lys Met Asp Ala
1 5

<210> 181

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic primer for generating mutant construct named MBPC125-SYEV

<400> 181
gacatctctg aagtgagtta ttaggcagaa ttccgacatg actcagg 47

<210> 182
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
primer for generating mutant construct named
MBPC125-SYEV

<400> 182
tgagtcattgt cggaattctg cctaataact cacttcagag atctcttc 48

<210> 183
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 183
Lys Lys Ser Tyr Glu Val
1 5

<210> 184
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 184
Val Glu Ala Asn Tyr Glu Val Glu Gly Glu
1 5 10

<210> 185
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: synthetic
peptide sequence

<400> 185
Val Glu Ala Asn Tyr Ala Val Glu Gly Glu
1 5 10

<210> 186
<211> 8
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 186

Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

<210> 187

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 187

Ser Tyr Glu Ala
1

<210> 188

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 188

Ser Tyr Ala Val
1

<210> 189

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: synthetic peptide sequence

<400> 189

Val Ser Tyr Glu Ala
1 5

<210> 190

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<400> 190

Ser Glu Ile Ser Tyr Glu Val Glu Phe Arg Trp Lys Lys
1 5 10

<210> 191

<211> 23

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<400> 191

Gly Leu Thr Asn Ile Lys Thr Glu Glu Ile Ser Glu Ile Ser Tyr Glu
1 5 10 15

Val Glu Phe Arg Trp Lys Lys
20

<210> 192

<211> 15

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)..(1)

<223> amino acid at position 1 is biotinylated

<220>

<221> SITE

<222> (14)..(14)

<223> cys at position 14 is derivatized with an oregon green

<400> 192

Lys	Glu	Ile	Ser	Glu	Ile	Ser	Tyr	Glu	Val	Glu	Phe	Arg	Lys	Lys
1				5				10					15	

<210> 193

<211> 22

<212> PRT

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic peptide sequence

<220>

<221> SITE

<222> (1)..(1)

<223> amino acid at position 1 is biotinylated

<220>

<221> SITE

<222> (21)..(21)

<223> cys at position 21 is derivatized with an oregon green

<400> 193

Gly	Leu	Thr	Asn	Ile	Lys	Thr	Glu	Glu	Ile	Ser	Glu	Ile	Ser	Tyr	Glu
1				5				10						15	

Val	Glu	Phe	Arg	Lys	Lys
			20		

<210> 194

<211> 6806

<212> DNA

<213> Artificial sequence

<220>

<223> Description of artificial sequence: synthetic DNA sequence

<400> 194

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gtcaattcag	ggtggtgaat	gtgaaaccag	taacgttata	cgatgtcgca	gagtatgccg	120
gtgtctctta	tcagaccgtt	tcccgcgtgg	tgaaccaggc	cagccacgtt	tctgcgaaaa	180
cgcgggaaaa	agtggaagcg	gcgatggcgg	agctgaatta	cattcccaac	cgcgtaggcac	240
aacaactggc	gggcaaacag	tcgttgctga	ttggcggttg	cacctccagt	ctggccctgc	300
acgcgccgtc	gcaaattgtc	gcggcgatta	aatctcgcgc	cgatcaactg	ggtgccagcg	360
tgggtggtgtc	gatggtagaa	cgaagcggcg	tcgaagcctg	taaagcggcg	gtgcacaatc	420
ttctcgcgca	acgcgtcagt	gggctgatca	ttaactatcc	gctggatgac	caggatgccca	480
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tgcgcgccat	taccgagtcc	gggctgcgcg	ttggtgcgga	tatctcggtg	gtgggatacg	900
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<212> PRT

<213> Artificial sequence

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<223> Description of artificial sequence: synthetic peptide sequence

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<221> MOD_RES

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<223> ACETYLTATION (MCA)

<220>

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<222> (11)..(11)

<223> 2,4-dinitrophenyl group after the Lys at position 11

<400> 195

Ser Glu Val Asn Leu Asp Ala Glu Phe Arg Lys Arg Arg
1 5 10

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<223> Description of artificial sequence: synthetic peptide sequence

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<222> (4)..(4)

<223> amino acid at position 4 has been derivatized with a statine

<400> 196

Ser Glu Val Asn Val Ala Glu Phe Arg Gly Gly Cys
1 5 10

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<222> (10)..(10)

<223> amino acid at position 10 has been derivatized with Bodipy FL

<400> 197

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